CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/SC/QC/2024-25 Date : 18.07.2024

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	Executive Engineer, Yelahanka Division, BBMP, Bangalore.
AGENCY	M/s. Sathya Constructions (Prop. Rajeshwaran Satheesh), Bangalore
NAME OF THE WORK	Supplying and laying of Various Bituminous mixes for repair of potholes and Road cut Portions from established Hot Mix Plant of minimum 50/80 TPH capacity (In Fully Working Condition) including manufacturing, supplying and laying including the cost of all materials, machineries, labours, consumables etc complete for a period of 2 years in Yelahanka Division, BBMP, Bangalore.
SAMPLE ID	Hot Mix Plant, Bangalore
DATE OF TESTING	18.07.2024

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472	472.5
3. Weight of Asphalt and Mineral matter Extracted, g	28	27.5
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	28	27.5
7. Bitumen content in %	5.60	5.50
8. Average	5.55	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	14.8	14.8	3.1	96.9	90 - 100
9.5	66.2	81	17.2	82.8	70 - 88
4.75	90.5	171.5	36.3	63.7	53 - 71
2.36	42.6	214.1	45.4	54.6	42 - 58
1.18	30.6	244.7	51.8	48.2	34 - 48
0.600	50.8	295.5	62.6	37.4	26 - 38
0.300	42.4	337.9	71.6	28.4	18 - 28
0.150	38.9	376.8	79.8	20.2	12 - 20
0.075	59.6	436.4	92.5	7.5	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	14.5	14.5	3.1	96.9	90 - 100
9.5	65.9	80.4	17.0	83.0	70 - 88
4.75	90.4	170.8	36.1	63.9	53 - 71
2.36	42.5	213.3	45.1	54.9	42 - 58
1.18	55.6	268.9	56.9	43.1	34 - 48
0.600	55.6	324.5	68.7	31.3	26 - 38
0.300	42.4	366.9	77.7	22.3	18 - 28
0.150	36.9	403.8	85.5	14.5	12 - 20
0.075	41.5	445.3	94.2	5.8	4 - 10

Note:

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- The results indicated above are based on the tests carried out on the samples collected at the site.
- Any Query regarding the report must be reported within 30 days from the date of testing

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

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Job No.: CACE/BBMP/SC/QC/2024-25 Date : 06.07.2024

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	Executive Engineer, Yelahanka Division, BBMP, Bangalore
AGENCY	M/s. Sathya Constructions (Prop. Rajeshwaran Satheesh), Bangalore
NAME OF THE WORK	Supplying and laying of Various Bituminous mixes for repair of potholes and Road cut Portions from established Hot Mix Plant of minimum 50/80 TPH capacity (In Fully Working Condition) including manufacturing, supplying and laying including the cost of all materials, machineries, labours, consumables etc complete for a period of 2 years in Yelahanka Division, BBMP, Bangalore.
SAMPLE ID	Hot Mix Plant, Bangalore
DATE OF TESTING	06.07.2024

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.5	473
3. Weight of Asphalt and Mineral matter Extracted, g	27.5	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.5	27
7. Bitumen content in %	5.50	5.40
8. Average	5.45	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	17.5	17.5	3.7	96.3	90 - 100
9.5	60.9	78.4	16.6	83.4	70 - 88
4.75	93.5	171.9	36.4	63.6	53 - 71
2.36	40.5	212.4	45.0	55.0	42 - 58
1.18	35.2	247.6	52.4	47.6	34 - 48
0.600	55.8	303.4	64.2	35.8	26 - 38
0.300	42.6	346	73.2	26.8	18 - 28
0.150	37.2	383.2	81.1	18.9	12 - 20
0.075	52.4	435.6	92.2	7.8	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	18.2	18.2	3.8	96.2	90 - 100
9.5	63.9	82.1	17.4	82.6	70 - 88
4.75	90.4	172.5	36.5	63.5	53 - 71
2.36	46.2	218.7	46.2	53.8	42 - 58
1.18	35.9	254.6	53.8	46.2	34 - 48
0.600	54.2	308.8	65.3	34.7	26 - 38
0.300	43.9	352.7	74.6	25.4	18 - 28
0.150	33.6	386.3	81.7	18.3	12 - 20
0.075	48.2	434.5	91.9	8.1	4 - 10

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Job No.: CACE/BBMP/SC/QC/2024-25 Date : 12.07.2024

ATTERBERG LIMITS TEST FOR WMM

Client : Executive Engineer, Yelahanka Division, BBMP, Bangalore.

Agency : M/s. Sathya Constructions (Prop. Rajeshwaran Satheesh), Bangalore.

Name of Work : Supplying and laying of Various Bituminous mixes for repair of potholes and Road cut Portions from established Hot Mix Plant of minimum 50/80 TPH capacity (In Fully Working Condition) including manufacturing, supplying and laying including the cost of all materials, machineries, labours, consumables etc complete for a period of 2 years in Yelahanka Division, BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 10.07.2024 to 12.07.2024

Material Type : Wet Mix Macadam

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition CL406.2.1.2
1	Liquid Limit	19.00	
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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A.E.E.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಜಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

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Job No.: CACE/BBMP/SC/QC/2024-25 Date : 15.06.2024

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Yelahanka Division, BBMP, Bangalore.
Agency	**M/s. Sathya Constructions (Prop. Rajeshwaran Satheesh),** Bangalore.
Name of Work	Supplying and laying of Various Bituminous mixes for repair of potholes and Road cut Portions from established Hot Mix Plant of minimum 50/80 TPH capacity (In Fully Working Condition) including manufacturing, supplying and laying including the cost of all materials, machineries, labours, consumables etc complete for a period of 2 years in Yelahanka Division, BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	15.06.2024

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	11.20	11.60	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	12.30	12.90	
	Combined Flakiness & Elongation index	23.50	24.50	

Note:

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ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
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